Those more experienced with EVR were more likely to use EVR. 30-day mortality was lower for EVR overall and for each quintile ($p<0.01$). The advantage ranged from 2.4% in Q5 to 4.0% in Q1. 5 year survival was improved for EVR for Q1-Q3 ($p<0.01$) and equivalent for Q4 and Q5. Both 30 day mortality and conversion rates decreased monotonically from Q1 to Q5 ($p<0.01$), with mortality ranging from 1.5% to 2.4% and conversion rates from 1.4 to 6.4%.

Conclusions: Using likelihood to receive surgery as a proxy for clinical judgment, clinical outcomes are better for patients who receive EVR in all groups. These data suggest both that clinical judgment is related to outcomes, and that EVR may offer advantage to some patients who don't receive it.

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PS36.

Severe Proximal Aneurysm Neck Angulation: Mid-Term Results and Morphological Changes after EVAR Using Latest Stent Graft Technology

Frederico M. Bastos Gonçalves[1], Joost A. van Herwaarden[2], Jasper W. van Keulen[2], Don Poldermans[1], Frans L. Moll[2], Jean-Paul M. de Vries[3], Hence J M. Verhagen[1]. [1]Erasmus University Medical Center, Rotterdam, Netherlands; [2]St. Antonius Hospital, Nieuwegein, Netherlands; [3]University Medical Center, Utrecht, Netherlands

Objectives: Proximal neck anatomy is considered a major limiting factor for EVAR. However, advances in stentgraft technology may have overcome previous boundaries. We aim to investigate the influence of severe proximal neck angulation on mid-term outcome when using the Endurant Stentgraft System.

Methods: Analysis of a prospective multicenter database identified 45 elective patients (mean age 74, 86% males) with severe angulation of the proximal neck (>75 degrees infra-renal or >60 degrees supra-renal), all treated with the Endurant stentgraft. Mean angles were 80.8 degrees (SD:15.6) infra-renal and 51.4 degrees (SD:21.1) supra-renal. These were compared to a matched control group without significant angulation. Mean follow-up was 18 months (±5.3), with all patients having at least 1-year surveillance. The primary endpoint was freedom from aneurysm-related complications. Secundary end-points were overall survival, re-intervention rate, and aneurysm sac behaviour. Post-processing using 3D reconstruction software was used for all patients. Student's t-test, Pearson's chi-squared and Kaplan-Maier analysis were used when appropriate.

Results: Survival was similar in both groups ($p=0.84$) as was freedom from AAA-related complications ($p=0.70$). Only one patient suffered from AAA rupture, and that was on the non-angulated group. At 1-year 65% of patients in the angulated group showed shrinkage of the aneurysm sac, compared to 60.4% in the non-angulated group ($p=0.78$), while sac increase was noted in 3.1% and 6.5%, respectively ($p=0.54$). No type-I endoleaks, migrations or stent fractures were noted in either group. At 1-year infra-renal neck neck angulation (degrees) changed to 63±21 degrees.

Conclusions: Proximal neck angulation had no significant influence on the early and mid-term results after EVAR when using the Endurant stentgraft. Little changes can be expected in the underlying anatomy during follow-up, confirming the compliant nature of the device.

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PS38.

Impact of Hospital Market Competition on Endovascular Aneurysm Repair Adoption and Outcomes

Rosh K. Sethi[1], Antonia J. Henry[2], Nathanael Hevelone[2], Stuart R. Lipsitz[2], Louis L. Nguyen[2]. [1]Harvard Medical School, Boston, MA; [2]Brigham and Women's Hospital, Boston, MA

Objectives: The percent of total abdominal aortic aneurysm (AAA) repairs performed by endovascular aneurysm repair (EVAR) increased rapidly from 32% in 2001 to 65% in 2006 with considerable variation between states. We hypothesized that hospitals in competitive markets were early EVAR adopters and had improved AAA repair outcomes. We tested this hypothesis using the Nationwide Inpatient Sample (NIS) database and linked Hospital Market Structure (HMS) files published by the Healthcare Cost and Utilization Project (HCUP).

Methods: 2003 NIS and HMS data was queried for patients who underwent repair for non-ruptured AAA. In HMS the Herfindahl Hirschman Index (HHI, range 0-1) is a validated and widely accepted economic measure of competition. Hospital markets were defined using a variable geographic radius that encompassed 90% of discharged patients. We conducted bivariate and multivariate logistic regression analyses for the dependent variable of EVAR use. A propensity score-adjusted multivariate logistic regression model was used to control for treatment bias in the assessment of competition on AAA-repair outcomes.

Results: A weighted total of 23,542 patients was included in our analyses. Patients at more competitive hospitals (lower HHI) were at increased odds of undergoing EVAR vs. open repair (Odds Ratio 1.127 per 0.1 decrease in HHI, $P<0.0127$) after adjusting for patient demographics, co-morbidities and hospital level factors (bedsize, teaching status, AAA repair volume and ownership). Com-